

Application No. 10/763,463
Amendment dated March 1, 2005
Reply to Office Action of November 3, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended). A method of improving the properties of a cementitious mixture, wherein said method comprises the steps of:

- a. providing a cementitious mixture;
- b. providing unitized fibrous constructs, each of said unitized fibrous constructs being comprised of:
 - i. two or more reinforcing fibrous components;
 - ii. one or more circumferential retaining elements;
 - iii. wherein said reinforcing fibrous components are combined in an essentially parallel orientation and said circumferential retaining element extends spirally and circumscribes about an overall circumference described by said combined and essentially parallel reinforcing fibrous components,
said circumferential retaining element circumscribing no more than 80% of the total surface area of said unitized fibrous constructs;
- c. adding into said cementitious mixture a quantity of unitized fibrous constructs so as to form a cementitious mixture and unitized fibrous construct blend;
and

d. mechanically agitating said cementitious mixture/unitized fibrous construct blend so as to disrupt said circumferential retaining elements and disperse said reinforcing fibrous components into said cementitious mixture.

Claim 2 (original). A method as in claim 1, wherein said fibrous constructs are natural fibers.

Claim 3 (original). A method as in claim 2, wherein said natural fibers are selected from the group consisting of rayon, cotton, pulp, flax, hemp, and the combinations thereof.

Claim 4 (original). A method as in claim 1, wherein said fibrous constructs are synthetic fibers.

Claim 5 (original). A method as in claim 4, wherein said synthetic fibers are selected from the group consisting of polyesters, polyolefins, polyamides, and the combinations thereof.

Claim 6 (original). A method as in claim 1, wherein said unitized fibrous constructs exhibit an overall circumference of between about 3 mm to 150 mm.

Claim 7 (original). A method as in claim 6, wherein said unitized fibrous constructs exhibit an overall circumference of between about 3 mm to 30 mm.

Claim 8 (original). A method as in claim 1, wherein said unitized fibrous constructs exhibit a length of between about 8 mm to 100 mm.

Application No. 10/763,463
Amendment dated March 1, 2005
Reply to Office Action of November 3, 2004

Claim 9 (original). A method as in claim 8, wherein said unitized fibrous constructs exhibit a length of between about 12 mm to 50 mm.

Claim 10 (original). A method as in claim 1, wherein said reinforcing fibrous compounds exhibit a finite staple length.

Claim 11 (original). A method as in claim 1, wherein said reinforcing fibrous components exhibit an infinite length.

Claim 12 (original). A method as in claim 1, wherein a portion or all of said reinforcing fibrous components are placed under tension.

Claim 13 (canceled).

Claim 14 (original). A method as in claim 11, wherein said unitized fibrous constructs comprise perforated segments.

Claim 15 (currently amended). A method of improving the properties of a cementitious mixture, wherein said method comprises the steps of:

- a. providing a cementitious mixture;
- b. providing unitized fibrous constructs, each of said unitized fibrous constructs being comprised of:
 - i. two or more reinforcing fibrous components;
 - ii. an interlocking means;
 - iii. wherein said reinforcing fibrous components are combined in an essentially parallel orientation and said interlocking means extends spirally and is

applied about an overall circumference described by said combined and essentially parallel reinforcing fibrous components,
said interlocking means comprising no more than 80% of the total surface area of the unitized fibrous constructs;

c. adding into said cementitious mixture a quantity of unitized fibrous constructs so as to form a cementitious mixture and unitized fibrous construct blend;
and

d. mechanically agitating said cementitious mixture/unitized fibrous construct blend so as to disrupt said interlocking means and disperse said reinforcing fibrous components into said cementitious mixture.

Claim 16 (original). A method as in claim 15, wherein said fibrous constructs are natural fibers.

Claim 17 (original). A method as in claim 16, wherein said natural fibers are selected from the group consisting of rayon, cotton, pulp, flax, hemp, and the combinations thereof.

Claim 18 (original). A method as in claim 15, wherein said fibrous constructs are synthetic fibers.

Claim 19 (original). A method as in claim 15, wherein said synthetic fibers are selected from the group consisting of polyesters, polyolefins, polyamides, and the combinations thereof.

Claim 20 (original). A method as in claim 15, wherein said unitized fibrous constructs exhibit an overall circumference of between about 3 mm to 150 mm.

Claim 21 (original). A method as in claim 20, wherein said unitized fibrous constructs exhibit an overall circumference of between about 3 mm to 30 mm.

22 (original). A method as in claim 15, wherein said unitized fibrous constructs exhibit a length of between about 8 mm to 100 mm.

Claim 23 (original). A method as in claim 22, wherein said unitized fibrous constructs exhibit a length of between about 12 mm to 50 mm.

Claim 24 (original). A method as in claim 15, wherein said interlocking means is a binder.

Claim 25 (canceled).

Claim 26 (original). A method as in claim 15, wherein a portion or all of said reinforcing fibrous components are placed under tension.

Claim 27 (original). A method as in claim 15, wherein said reinforcing fibrous components exhibit a finite staple length.

Claim 28 (original). A method as in claim 15, wherein said reinforcing fibrous components exhibit an infinite length.

Claim 29 (currently amended). A cementitious reinforcement comprising unitized fibrous constructs, each of said unitized fibrous constructs being comprised of two or more reinforcing fibrous components and one or more circumferential retaining

Application No. 10/763,463
Amendment dated March 1, 2005
Reply to Office Action of November 3, 2004

elements, wherein said reinforcing fibrous components are combined in an essentially parallel orientation and said circumferential retaining element extends spirally and circumscribes about an over all circumference described by said combined and essentially parallel reinforcing fibrous components,

said circumferential retaining element circumscribing no more than 80% of the total surface area of said unitized fibrous constructs.

Claim 30 (canceled).

Claim 31 (currently amended). A cementitious reinforcement comprising unitized fibrous constructs, each of said unitized fibrous constructs being comprised of two or more reinforcing fibrous components and an interlocking means, wherein said reinforcing fibrous components are combined in an essentially parallel orientation and said interlocking means extends spirally and is applied about an overall circumference described by said combined and essentially parallel reinforcing fibrous components,

said interlocking means comprising no more than 80% of the total surface area of the unitized fibrous constructs.

Claim 32 (canceled).